REMARKS

Claims 1-16 are the claims originally pending in the application. By this Amendment, Applicants cancel claim 13. Therefore, claims 1-12, 14-16 are pending in the application.

Claim Objections

Claim 13 has been objected by the Examiner. Applicants have canceled claim 13 without prejudice or disclaimer.

Rejections under 35 U.S.C. § 112, second paragraph

Claims 1-16 have been rejected under 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicants submit that the claims have been amended and that claims 1-12, 14-16 comply with 35 U.S.C. § 112, second paragraph.

Prior Art Rejections

Claims 1-16 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Gonzalez, Digital Image Processing, 2/E" (ISBN-10:020118-758. Published: 11/09/2001), hereinafter "Gonzalez", in view of Morris Mano, Computer System Architecture (Prentice Hall; 3rd edition. ISBN-10: 0131755633), hereinafter "Mano".

Applicants amend the claims and traverse the rejections.

Independent Claim 1

Amended claim 1 recites, *inter alia*, the operating means does not utilize all the N x M kernel coefficients for said multiplication.

Applicants submit that the combination of Gonzalez and Mano does not teach or even suggest this feature. In Gonzalez, the image f of size M x N is filtered by a mask w of size M x N. Specifically, for each point in the image f, the coefficients of the mask are multiplied by the corresponding values of the image f. For example, when the mask w is centered on the point f(x,y) in the image f, a filtered value g(x,y) is generated. On page 116, Gonzalez states that

$$R = w(-1,-1) * f(x-1,y-1)+\ldots\ldots+w(1,1)*f(x+1,y+1)$$

R corresponds to the filtered value g(x,y) for the image point f(x,y). It is clear from the above equation and equation 3.5-1 for g(x,y) that Gonzalez discloses utilizing all the coefficients of the mask w in the filtering process, i.e., Gonzalez multiplies each element of the mask w by the corresponding element in the image f.

On the contrary claim 1 discloses a more efficient filtering scheme in which the operating means does not utilize all the N x M kernel coefficients for the multiplication. Mano does not cure this deficiency of Gonzalez.

Therefore, claim 1 is not obvious over the combination of Gonzalez and Mano. The Examiner is respectfully requested to withdraw the rejection of claim 1.

Independent Claims 5 and 9

Claims 5 and 9 recite, *inter alia*, a feature similar a feature of claim 1 that distinguishes claim 1 from the prior art. Therefore, claims 5 and 9 are patentable over the combination of Gonzalez and Mano.

The remaining dependent claims are patentable at least by virtue of their dependency.

Claims 3, 7, and 11 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Gonzalez in view of Mano as applied to Claims 1, 5, and 9, and further in view of Hsu, "Two-dimensional discrete cosine transform using SIMD instructions" (US PAT-NO: 6973469), hereinafter "Hsu".

Hsu does not remedy the deficiencies of Gonzalez and Mano. Therefore, claims 3, 7, and 11 are patentable.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

_/Howard L. Bernstein/ hlb_____
Howard L. Bernstein
Registration No. 25,665

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

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23373
CUSTOMER NUMBER

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